

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

5

**Listing of Claims:**

1-28 (canceled)

29. (currently amended) A method of forming a carbon deposit inhibiting thermal barrier coating on a gas turbine engine surface that will be exposed to the flow of burning engine gas and fuel droplets, ~~[[ such ]]~~ the method comprising ~~the steps of:~~

5

a) depositing a layer of thermal barrier material onto the engine surface that will be exposed; and

b) depositing a layer of carbon deposit inhibiting material onto the layer of thermal barrier material.

30. (currently amended) The ~~[[ A ]]~~ method of ~~in accordance with Claim 29,~~ wherein the thermal barrier material comprises ~~[[ is ]]~~ a ceramic material.

31. (currently amended) The ~~[[ A ]]~~ method of ~~in accordance with Claim 29,~~ wherein the layer of thermal barrier material is deposited to ~~form a layer having a thickness in the range of five to one hundred mils.~~

32. (canceled)

33. (currently amended) The ~~[[ A ]]~~ method of ~~in accordance with Claim 29,~~ wherein the carbon deposit inhibiting material ~~[[ is ]]~~ comprises a

refractory oxide selected from the [[ a ]] group consisting of ~~alumina, yttria, yttrium aluminum garnet, and lanthanum oxide.~~

34. (currently amended) The [[ A ]] method of ~~in accordance~~ with Claim 29, wherein the layer of carbon deposit inhibiting material is deposited to ~~form a layer having~~ a thickness in the range of one to fifty mils.

35. (currently amended) The [[ A ]] method of ~~in accordance~~ with Claim 29, wherein the layer of carbon deposit inhibiting material is deposited to ~~form a layer having~~ a thickness in the range of one to five mils.

36. (currently amended) The [[ A ]] method of ~~in accordance~~ with Claim 29, wherein both the layer of thermal barrier material and the layer of carbon deposit inhibiting material ~~layers are~~ deposited by plasma spraying ~~of the materials.~~

37. (currently amended) The [[ A ]] method of ~~in accordance~~ with Claim 36, wherein step b) is performed immediately following step a), and wherein step a) and step b) are performed ~~the carbon deposit inhibiting layer is applied to the thermal barrier layer by the same equipment immediately~~  
5 ~~following deposition of the thermal barrier layer.~~

38. (currently amended) The [[ A ]] method of ~~in accordance~~ with Claim 29, wherein both the layer of thermal barrier material and the layer of carbon deposit inhibiting material ~~the layers are~~ deposited by electron beam physical vapor deposition ~~of the two materials.~~

39. (currently amended) The [[ A ]] method of ~~in accordance~~ with Claim 29, wherein the layer of thermal barrier material and the layer of carbon deposit inhibiting material ~~are each layer is~~ deposited by a process

method selected from the [[ a ]] group consisting of plasma spraying, electron  
5 beam physical vapor deposition, chemical vapor deposition, and slurry dipping.

40. (New) The method of Claim 29, wherein the carbon deposit  
inhibiting thermal barrier coating consists essentially of:

a layer of stabilized zirconia disposed on the gas turbine engine  
surface; and

5 a refractory oxide layer disposed directly on the layer of stabilized  
zirconia, wherein the refractory oxide layer comprises yttria or lanthanum oxide.

41. (New) The method of Claim 29, wherein the layer of thermal  
barrier material comprises yttria stabilized zirconia.

42. (New) A method of forming a carbon deposit inhibiting thermal  
barrier coating on a gas turbine engine surface, comprising:

a) depositing a layer of thermal barrier material on the gas turbine engine  
surface; and

5 b) depositing a layer of carbon deposit inhibiting material on the layer of  
thermal barrier material,

wherein the layer of thermal barrier material comprises a ceramic having  
a thickness in the range of five to one hundred mils,

10 wherein the layer of carbon deposit inhibiting material comprises yttria or  
lanthanum oxide, and

wherein the layer of carbon deposit inhibiting material has a thickness in  
the range of one to fifty mils.

43. (New) The method of Claim 42, wherein the gas turbine engine  
surface comprises a silicon carbide composite or a silicon nitride material.

44. (New) The method of Claim 42, wherein the gas turbine engine surface comprises a nickel based superalloy or a cobalt based superalloy.

45. (New) The method of Claim 42, wherein the gas turbine engine surface comprises an internal wall of a combustor.

46. (New) The method of Claim 42, wherein the layer of carbon deposit inhibiting material inhibits the adherence of carbon nodules to the gas turbine engine surface.

47. (New) The method of Claim 42, wherein the layer of carbon deposit inhibiting material has a thickness in the range of one to five mils.

48. (New) The method of Claim 42, wherein the layer of thermal barrier material comprises stabilized zirconia.

49. (New) The method of Claim 42, wherein the layer of thermal barrier material comprises an oxidation resistant bond coat.

50. (New) A method of forming a carbon deposit inhibiting thermal barrier coating on a gas turbine engine surface, consisting of:

a) depositing a layer of thermal barrier material on the engine surface; and

5 b) depositing a layer of carbon deposit inhibiting material on the layer of thermal barrier material.

51. (New) The method of Claim 50, wherein:

step a) comprises depositing the layer of thermal barrier material to a thickness in the range of five to one hundred mils, and

step b) comprises depositing the layer of carbon deposit inhibiting  
5 material to a thickness in the range of one to fifty mils.

52. (New) The method of Claim 50, wherein:

step a) comprises depositing a layer of a ceramic material, and

step b) comprises depositing a refractory oxide selected from the group  
consisting of alumina, yttria, and lanthanum oxide.

53. (New) The method of Claim 50, wherein:

step a) comprises plasma spraying the layer of thermal barrier  
material on the engine surface, and

step b) comprises plasma spraying the layer of carbon deposit  
5 inhibiting material on the layer of thermal barrier material.

54. (New) The method of Claim 53, wherein step b) is performed  
immediately following step a).